

als represent like parts throughout the views. The present invention, designated by the reference numeral **10** comprises a kit for use in a dental operator and is best shown in **FIGS. 1 and 8**. Referring specifically to **FIG. 1**, the kit **10** includes one or more syringes **20**, each filled with a pre-selected fluid **48**, one or more removable tips **50** and storage packaging **70** for the syringe(s) **20** and tip(s) **50**. The syringe **20** and tip **50** components are preferably disposable. Each syringe **20** is pre-filled with either a carries detection fluid, sodium hypochlorite or a hemostatic agent **48**.

[**0020**] As shown in **FIGS. 4 through 7**, each syringe includes a main body **22** defining an interior cavity **24** and an upper gripping surface **26**. The interior cavity includes two openings. A first opening **28** receives the plunger assembly **30** and the second opening **32** comprises the fluid outlet **34**. The selected fluid **48** (see **FIGS. 1 through 3**) occupies the cavity **24**. The plunger assembly **30** is positioned within the first opening **28** and includes an elongated member **36** having a first end **38** that sealingly engages with the interior cavity **24** and a second end **40** including a thumb pad **42** for application of pressure to the syringe **20**.

[**0021**] The outlet **34** includes a separable connection mechanism **42** for receiving and attaching a disposable tip **50**. In a preferred embodiment, a LUER® style locking configuration is used. As best shown in **FIG. 7**, the disposable tips **50** include an inlet end **52** and an outlet end **56**. The inlet end **52** includes a separable connection mechanism **54** that mates with connection **42**. The inlet end **52** couples to the syringe outlet **34** with, for example, the LUER® style locking configuration. The outlet end **56** may simply include an aperture **58** (see **FIG. 4**) for the fluid **48** to flow through or may include additional structure such as brush bristles **60** or fibers **62** as shown in **FIGS. 6 and 5**, respectively. The bristles **60** and fibers **62** can be of any pre-selected length and/or diameter and are adhered to the outlet end **56** of the tip **50** using conventional techniques. A tip **50** having a plurality of fibers **62** attached thereto is commonly known as a flocked applicator or flocked tip. A tip **50** having a plurality of bristles attached thereto is commonly known as a brush applicator or brush tip.

[**0022**] As shown in **FIGS. 1 through 3 and 8**, the package construction **70** includes a tray **72** having a number of cavities **74** for receiving and holding the syringes **20** and tips **50**. Each of the plurality of syringes **20** is retained in a separate elongate cavity **76**. Each syringe cavity **76** includes a gripping structure **78** for frictionally retaining each syringe. A larger cavity **80** is provided for the tips **50**. In a preferred embodiment, an oval shaped cavity is provided for the tips. The tips **50** may be placed directly in the cavity **80** or the tips may be placed in a separate container **82** that is sized to be received within the larger cavity **80**. In a preferred embodiment, the oval shaped cavity is dimensioned to receive two tip containers **82** spaced apart in a side-by-side relationship. A removable cover **84**, secured by cover retention members **86** may be placed over the tray **72** before use or in between uses.

[**0023**] Each syringe **20** is pre-filled with one of three pre-selected fluids **48**. Once filled, a plug **44** is attached to the syringe outlet **34** to seal the fluid within the interior cavity **24** and prevent contamination of the fluid **48**. The first fluid is carries detection fluid, also called dentine carries dye. Carries detection fluid is useful for identification of

fissure carries, inner carious dentine in clinically accessible lesions and occlusal carious lesions. The fluid stains the denatured collagen in the inner part of the lesion thereby allowing the dentist to positively identify the lesion. Once the fluid is applied, the excess is rinsed away and the area is examined for residual staining which is an indication of the presence of dentine caries.

[**0024**] The second fluid is sodium hypochlorite. Sodium hypochlorite fluid is utilized in root canal treatment for its antimicrobial properties. In addition, sodium hypochlorite is known to denature toxins and dissolve organic tissue. Once the dentine has been exposed and the diseased tissue mechanically removed from the canal, a solution of sodium hypochlorite in the range of 0.5 to 7% is used to clean and flush the canal.

[**0025**] The third fluid includes hemostatic agents. Hemostatic agents are used primarily to control bleeding in the gingival surfaces of the mouth, namely the gums. Often during a dental procedure, the gingival surface must be cut or disrupted. A hemostatic agent such as VISCOSTAT®, ASTRINGEDENT® manufactured by Ultradent Products of South Jordan, Utah, and HEMODENT® manufactured by Stone Pharmaceuticals of Philadelphia, Pa. is applied to the affected area to substantially stop the bleeding.

[**0026**] In use, the dentist removes a syringe **20** containing the pre-selected fluid **48** from the storage packaging **70**. The plug **44** is removed from the syringe outlet **34** and a tip **50** is connected. If necessary during the dental procedure, a first selected tip **50** can be removed and a different tip **50** can be replaced on the syringe **20**. When the procedure is complete, the syringe **20**, any remaining fluid **48**, and any used tips **50** are preferably disposed. The remaining, unused components can be utilized in subsequent dental procedures.

[**0027**] The foregoing is considered as illustrative only of the principles of the invention. Furthermore, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described. While the preferred embodiment has been described, the details may be changed without departing from the invention, which is defined by the claims.

What is claimed is:

1. A package construction for a device for applying dental fluids comprising:

- a plurality of syringes, each syringe having a fluid chamber and an outlet, said chamber containing a fluid selected from the group consisting of carries detection, sodium hypochlorite and hemostatic agent;
- a plurality of disposable tips, each tip adapted to be attached to one of said syringes at said outlet;
- a molded plastic tray, said tray having a plurality of receptacles formed therein for receiving and retaining said syringes and at least one receptacle formed therein for receiving said tips.

2. The package construction of claim 1 further including a cover, the cover being removably attached to the tray.

3. The package construction of claim 1 wherein each syringe further includes a plug, said plug being removably installed in each of said outlets.